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COMPARATIVE PERIODS OF NESTLING LIFE  
OF SOME NORTH AMERICAN NIDICOLÆ

BY FRANK L. BURNS

[CONTINUED FROM JUNE ISSUE]

## CORVIDÆ:

- American Magpie, 22 days (Wheelock, Bds. Calif., 387.)  
Blue Jay, 20-21 days (Burns Ms.; Knight, Bds. Me., 387.)  
California Jay, 18 days (Bendire, Life Hist., ii, 376.)  
Canada Jay, about 15 days (Warren, Auk, xvi, 19.)  
American Raven, about 28-30 days (Wheelock, Bds. Calif., 407;  
Bendire, Life Hist., ii, 399.)  
Northern Raven, about 30-35 days (Harlow, Cassinia, xiv, 11;  
Eifrig, Auk, xxii, 312.)  
American Crow, about 28 days (Redfield, Bd.-Lore, xi, 115;  
Knight, Bds. Me., 335; Redfield Ms.)  
California Crow, 25 days (Wheelock, Bds. Calif., 410.)  
Fish Crow, about 21 days (Bendire, Life Hist., ii, 418.)  
Clark's Nutcracker, about 18 days (Bendire, Ib., 423); 17-21  
days (Bradbury, Condor, xix, 150); 28 days (Skinner, Ib., xviii,  
64.)  
Pinon Jay, 21-22 days (Bendire, Life Hist., ii, 326; Wheelock,  
Bds. Calif., 495.)

## STURNIDÆ:

- Starling, at least 15 days (Allen, Bd.-Lore, xiv, 112); 21 to 22  
days (Brock, Zoölogist, 1910, 117.)

## ICTERIDÆ:

- Bobolink, 8 days (Otto, Bd.-Lore, xxi, 179-180); 10-14 days  
Eaton, Bds. N. Y., 2, 224.)  
Cowbird, 10-12 days (Knight, Bds. Me., 343; Ferry Ms.; Abbott,  
Bd.-Lore, xi, 149; Pierson, Ib., xviii, 128.)  
Yellow-headed Blackbird, about 12 days (Roberts, Bd.-Lore, xiv,  
252.)  
Red-winged Blackbird, 11 and 14 days (Herrick, Home Life of  
Wild Birds, 12 and 21.)  
San Diego Red-winged Blackbird, more than 12 days (Wheelock,  
Bds. Calif., 480.)  
Meadowlark, 10-12 days (Knight, Bds. Me., 349; Wheelock,  
Nestlings of Forest and Marsh, 25.)  
Western Meadowlark, 10-12 days (Saunders, Condor, xvi, 136;  
Wheelock, Bds. Calif., 513.)  
Arizona Hooded Oriole, 14 days (Wheelock, Ib., 519.)  
Baltimore Oriole, 15-18 days (Knight, Bds. Me., 353.)

- Bullock's Oriole, 15 days (Knight, Bds. Me., 354.)  
 Rusty Blackbird, 16 days (Bendire, Life Hist., ii, 492); 11 days, flying 13 days (Kinnard, Auk, xxxvii, 421.)  
 Brewer's Blackbird, 16 days (Bendire, Ib., 496.)  
 Purple Grackle, 18 days (Bendire, Ib., 499); about 11 or 12 days (Clise, Bd-Lore, xx, 378.)  
 Bronzed Grackle, about 34 days (Cameron, Auk, xxiv, 401.)

## FRINGILLIDÆ:

- Evening Grosbeak, more than 16 days (Fleming, Auk, xx, 214.)  
 Western Evening Grosbeak, 15 days (Wheelock, Bds. Calif., 525.)  
 Pine Grosbeak, 20 days (Knight, Bds. Me., 368.)  
 Purple Finch, 14 days (Knight, Ib., 375.)  
 House Finch, 14 days (Keeler, Zoe, i, 176; Bergtold, Auk, xxx, 58; Osterhout, Ool., xxxv, 57.)  
 Gray-crowned Rosy Finch, 21 days (Wheelock, Bds. Calif., 211.)  
 American Goldfinch, 15-16 days (Norton, J.M.O.C., v, 46; Knight, Bds. Me., 388; Bruce, Auk, xv, 243); about 18 days (Beebe, Bd-Lore, vii, 190.)  
 California Goldfinch, nearly 21 days (Cookman, Ool., 28.)  
 Snow Bunting, less than 14 days (Ekblaw, Wils. Bul., 107, 43.)  
 English Sparrow, 13-16 days (Knight, Bds. Me., 393); about 7 days (Chapman, Bds. E. N. A., rev. ed., 68.)  
 Redpoll, about 11 days (Dice, Condor, xx, 131.)  
 Vesper Sparrow, 13-16 days (Knight, Bds. Me., 401); 8 days (Perry, Auk, xxxv, 316.)  
 Western Vesper Sparrow, 8-10 days (Wheelock, Bds. Calif., 214.)  
 Savannah Sparrow, 14 days (Knight, Bds. Me., 407.)  
 Bryant's Sparrow, 10 days (Wheelock, Bds. Calif., 217.)  
 Lark Sparrow, 10 days (Wheelock, Ib., 222.)  
 White-throated Sparrow, 14 days (Knight, Bds. Me., 418.)  
 Chipping Sparrow, 10-12 days (Knight, Ib.; Burns Ms.)  
 Field Sparrow, 10-11 days (Burns Ms.)  
 Slate-colored Junco, 12 days (Eliot, Jr., Ms.)  
 Pink-sided Junco, about 14 days (Skinner, Condor, xxii, 168.)  
 Song Sparrow, 11 days (Link Ms.; Kuser, Bd-Lore, xiv, 350.)  
 Merrill's Song Sparrow, 14 to 16 days (Rust, Condor, xxi, 148.)  
 Swamp Sparrow, 13 or 14 days (Knight, Bds. Me., 434.)  
 Towhee, 9 or 10 days (Heil, Bd-Lore, xi, 158.)  
 Green-tailed Towhee, 10-12 days (Wheelock, Bds. Calif., 252.)  
 Cardinal, 8 days (Burns Ms.; Eaton, Auk, xx, 56); 9 days (Harvey, Ib., xx, 56); about 10 days (Steele, Bd-Lore, xviii, 292.)  
 Western Blue Grosbeak, more than 10 days (Wheelock, Bds. Calif., 498.)  
 Rose-breasted Grosbeak, 9 days (Allen, Auk, xxxiii, 53); about 12 days (Davidson, Ib., vi, 191.)

Black-headed Grosbeak, less than 14 days (Wheelock, Bds. Calif., 255.)

Indigo Bunting, 9 days (Cleveland, Bd-Lore, v, 87; Burns Ms.)

Lazuli Bunting, 10 days (Finley, Condor, viii, 10.)

Dickcissel, 9 or 10 days (Gross, Auk, xxxviii, 19.)

#### TANAGRIDÆ:

Louisiana Tanager, 9 days (Head, Am. Orn., Bd. Mag., 3, 13.)

#### HIRUNDINDÆ:

Purple Martin, 24-28 days (Jacobs, The Story of a Martin Colony, 15.)

Cliff Swallow, 16 or 17 days (Knight, Bds. Me., 454); about 18 days (Wentworth, Ool., xvi, 66); 21-24 days (Vietor, Bd-Lore, xiv, 152.)

Barn Swallow, 14 days (Wheelock, Bds. Calif., 502; Burns Ms.; Kouwenhoven, Bd.-Lore, xvi, 463.)

Tree Swallow, about 16-17 days (Knight, Bds. Me., 459; Hunt, Bd.-Lore, vi, 93.)

#### BOMBYCILLIDÆ:

Cedar Waxwing, 12-14 days (Herrick, Pop. Sci. Mo., 77, 28; also Home Life of Wild Birds, 18); 16-18 days (Knight, Bds. Me., 467; Saunders, Auk, xxviii, 327; 12 days (Ferry Ms.)

Phainopepla, 20 days (Myers, Condor, x, 72.)

#### LANIIDÆ:

Loggerhead Shrike, 14-15 days (McKennon, Ms.)

Migrant Shrike, 18-20 days (Knight, Bds. Me., 472.)

#### VIRIONIDÆ:

Red-eyed Vireo, 12 days (Burns Ms.); 11-13 days (Herrick, Bd.-Lore, vi, 113; Perkins, Ib., xii, 206; Stephens, Bul. Labr. Nat. Hist. State Uni. Iowa, vii, 3, 25.)

Philadelphia Vireo, 13 days (Lewis, Auk, xxxviii, 192.)

Western Warbling Vireo, 15 days (Rust, Condor, xxii, 94.)

Yellow-throated Vireo, 11 days (Herrick, Home Life of Wild Birds, 69); about 12 or 14 days (Hutchins, Bd.-Lore, iv, 120.)

Hutton's Vireo, 16 days (Van Fleet, Condor, xxi, 164.)

#### MNIOTILTIDÆ:

Black and White Warbler, 8 days (Stanwood, J. M. O. S., xiii, 63); 10 days (Johnson, Ib., vii, 41); 11 days (Bartsch, Osprey, v, 90); about 11-12 days (Williams, Bd.-Lore, vii, 172.)

Worm-eating Warbler, 10 days (Burns, Wills. Bul., 37, 96, and Bd.-Lore, vii, 139.)

Blue-winged Warbler, 8 days (Burns, in Chapman's Warblers of N. A., 69); 9 days (Wright, Auk, xxvi, 345.)

Brewster's Warbler, 8-9 days (Faxon, Auk, xxxiv, 482, and Memoirs of the Mus. Comp. Zool., xl, 2, 60.)

Golden-winged Warbler, 9 days (Crosby, Bd.-Lore, xiv, 146); 10 days (Jacobs, Gleanings, iii, 22.)

Nashville Warbler, 10-11 days (Stanwood, J. M. O. S., xii, 29, also Bluebird, vi, 244; Knight, J. M. O. S., viii, 10, and Bds. Me., 493.)

Yellow Warbler, 9 days (Bigglestone, Wils. Bul., 83, 49); 11-15 days (Knight, Bds. Me., 503.)

Myrtle Warbler, 8 days (Chamberlain quoting Banks, B. N. O. C., viii, 121); 12-14 days (Knight, Bds. Me., 510.

Audubon's Warbler, 14 days (Wheelock, Bds. Calif., 540.)

Magnolia Warbler, 10 days (Stanwood, Auk, xxvii, 389.)

Chestnut-sided Warbler. 10-11 days (Steirle, Ool.) 12 days (Willard, Ool., xxviii, 91.)

Bay-breasted Warbler, 11-12 days (Stanwood, J. M. O. S., xi, 107.)

Black-throated Green Warbler, 10 days (Stanwood, Auk, xxvii, 289.)

Kirtland's Warbler, 12 or 13 days (Wood in Chapman's Warblers of N. A., 207.)

Yellow Palm Warbler, about 12 days (Knight, Bds. Me., 542.)

Prairie Warbler, about 10 days (Daniel, Osprey, v, 118.)

Oven-bird, 8 days (Stanwood, J. M. O. S., xiii, 19); 12 days (Burns Ms.)

Kentucky Warbler. 8 days (Burns in Chapman's Warblers of N. A., 238.)

Mourning Warbler, more than 7 days (Faxon, Auk, vi, 104.)

MacGillivray's Warbler. 9 days (Wyte, Condor, xviii, 123; Wheelock, Bds. Calif., 546.)

Maryland Yellow-throat, 9 or 10 days (Redfield, Bd.-Lore, xiii, 195.)

Yellow-breasted Chat, not more than 11 days (Hitchcock, Bd.-Lore, xiv, 355.)

Long-tailed Chat, more than 8 days (Wheelock, Bds. Calif., 551.)

American Redstart, 12-14 days (Knight, Bds. Me., 575; Kohler, Ool., 27, 128.)

#### MIMIDÆ:

Mockingbird, 8 days (Finklea and Morris, Bd.-Lore, xv, 308); 9 and 10 days (MacKennon Ms.); 10 days (Daniel, Wils. Bul., 39, 71); 10-12 days (Baldwin, Bd.-Lore, iii, 191.)

Catbird, 9-10 days (Herrick, Home Life, 77 and 79; Verrill, Auk, x, 304); 10 days (Bartsch, Osprey, iv, 149; Shufeldt, Auk, x, 304; Redfield Ms.); about 12 days (Gabrielson, Wils. Bul., 79, 65.)

Brown Thrasher, 10 days (Wheelock, Nestlings Forest and Marsh, 232); 11 days (Gabrielson, Wils. Bul., 79, 85; Ferry Ms.);

10-12 days (Heil, Bd.-Lore, x, 103.)

Curve-billed Thrasher, 12 days (Clark, Auk, xxi, 216.)

California Thrasher, 12-14 days (Wheelock, Bds. Calif., 271.)

Crissal Thrasher, 11-12 days (Wheelock, Ib., 276.)

#### TROGLODYTIDÆ:

Carolina Wren, at least 10 days (Van Gilluwee, Bd.-Lore, xii, 150.)

Bewick's Wren, 14 days (Wiley Ms.)

House Wren, 14 days (Knight, Bds. Me., 588; Bayles, Auk, xxxiv, 90); 15 days (Burns Ms.); 17 days (Sherman, Wils. Bul., 95, 94.)

Western House Wren 16 days (Wheelock, Bds. Calif., 287.)

Alaska Wren, 22 days (Heath, Condor, xxii, 55.)

Tule Wren, 12 days (Wheelock, Bds., Calif., 292.)

#### CERTHIIDÆ:

Brown Creeper, 13 or 14 days (Tyler, Auk, xxxi, 50.)

Sierra Creeper, 15 days (Wheelock, Bds. Calif., 296)

#### SITIDÆ:

Red-breasted Nuthatch, 14 days (Moore, Ool., 23, 154); more than 14 days (Shaw, Bd.-Lore, xviii, 166.)

Rocky Mountain Nuthatch, more than 11 days (Richards, Condor, x, 194.)

#### PARIDÆ:

Plain Titmouse, 16 days (Wheelock, Bds. Calif., 350.)

Chickadee, 13-14 days (Knight, Bds. Me., 607; Redfield Ms.; Forbush, Bd.-Lore, xiv, 373); 14-15 days (Stanwood, J. M. O. S., xiii, 28); 18 days (Link Ms.)

Mountain Chickadee, nearly 21 days (Wheelock, Bds. Calif., 353.)

Verdin, 21 days (Wheelock, Ib., 557.)

#### CHAMAEIDÆ:

Wren-tit, 16 days (Newberry, Condor, xviii, 65.)

#### SILVIIDÆ:

Ruby-crowned Kinglet, 8 days (Head, Bd.-Lore, v, 53.)

Western Gnatcatcher, at least 9 days (Merriam, Auk, xiii, 124.)

#### TURDIDÆ:

Wood Thrush, 10 days (Ferry Ms.; Johnson, Osprey, iv, 18); 13 days (Pierson Ms.; Burns Ms.); 14 days (Judson, Bd.-Lore, xviii, 213.)

Wilson's Thrush, 10 days (Herrick, Home Life, 12.)

Russet-backed Thrush, about 14 days (Atkinson, Ool., xvi, 180.)

Olive-backed Thrush, 10-12 days (Stanwood, Wils. Bul, 83, 448, and 84, 121.)

Hermit Thrush, 10 days (McClintock, Auk, xxvii, 417); 10-12

days (Stanwood, Wils. Bul., 95, 64, also Bd.-Lore, xii, 103, and Auk, xxvii, 418); 12 days (Perry, Auk, xxxv, 321.)

American Robin, 11-12 days (Herrick, Home Life, 40 and 47); 12 days (Redfield Ms.; Stanwood, Home Progress, 5, 310); 12-13 days (Tyler, Auk, xxx, 395 and 398); 13 days (Gillette, Bd.-Lore, viii, 129; Judson, Ib., xvii, 213); 14 days (Howe, Auk, xv, 165; Chapman, Bds. E. N. A., rev. ed., 68.)

Western Robin, 10-11 days (Saunders, Condor, xvi, 143.)

Bluebird, 15 days (Knight, Bds. Me., 643); 16 days (Hodge, Bd.-Lore, vi, 44; Hubbard, Ib., xi, 66; Boulton, Ib., xviii, 125); 18 days (McKinnon Ms.)

Mountain Bluebird, more than 12 days (Wheelock, Bds. Calif., 508.)

<sup>1</sup> Some twelve years ago, in collaboration with Dr. Lynds Jones, printed forms were circulated among the members of the Wilson Ornithological Club for a coöperative study along certain lines of the nesting habits of our birds and a number of original observations were received by the writer from Dr. G. C. Fisher while at DeFuniak Springs, Fla.; Cold Spring Harbor, Long Island; Butler, Logan and Miami Cos., Ohio; Messrs. T. A. Elliot, Jr., North East Harbor, Maine; J. F. Ferry, Lake Forest, Ill.; H. E. Haughey, Bangs, Ohio; Henry Link, Waterloo, Ind.; R. F. Miller, Frankford, Pa.; Angus McKennon, DeFuniak Springs, Fla.; L. S. Pierson, Valley Forge and Wayne, Pa.; A. C. Redfield, Wayne, Pa., and Barnstable, Mass.; A. C. Read, Isle of Pine, Cuba; C. H. Rogers, Princeton, N. J.; E. W. Vickers, Elsworth, Ohio; Mesdames G. K. Holmes, Summit, N. J.; O. M. Schantz, Morton Park, Ill, and Farida Wiley, Sidney, Ohio; before the project was abandoned. This paper is written in order to keep faith with the observers who contributed some very full reports. I am also indebted to Dr. C. W. Townsend, Messrs. O. E. Baynard, A. B. Howell, G. Willett, and J. H. Gurney (of Norwich, England) for information.